Notebook, N-96-03-12

This notebook is a continuation of N-96-03-10. The only dated entry is from March 1896. All entries are by Edison. The book contains lists of compounds tested for fluorescence, as well as notes, drawings, and calculations regarding the x-ray. There is also a draft in Edison's hand of an advertisement for the Edison Storage Battery Co., which was incorporated in May 1901. The pages are unnumbered, and several pages have been removed from the book. Approximately 85 pages have been used.

6225 | 220000 / 18675 / 3825 | 35

.66
28
35
10
139

50.

2600

14169
1390
12.779

4643

550
220
411.

.1

55
3000
1654
1600

1278
1118
160

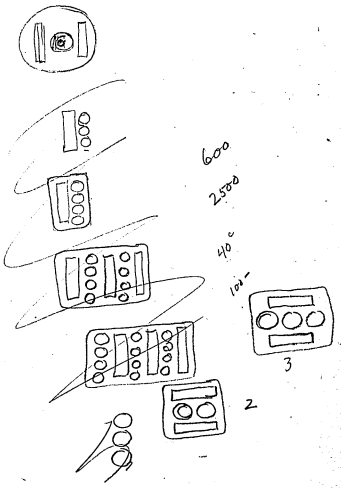
8

24
3000
72

8029

7200
411
7200
7200
2829
2829

4 | 29590 / 7397



X Ray experiments —

March 12 1896

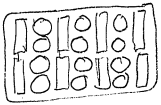
Fluorescence —

Aluminium —

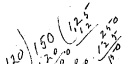
Oxide
Hydrate.
Benzoic
Chloride
Chromate
Sulphate
Chloride,
Resinate
Alum
acetate
phosphate
Bromide
Nitrate
Oxalate

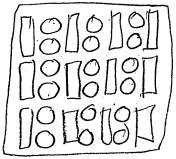
4 5 amp

8 10 amp

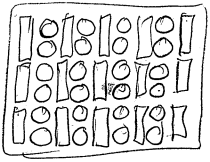


12 1500

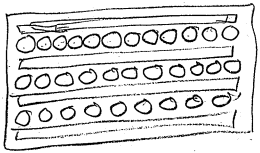




18 22½ amp



24 30 amp



36
45 amp

Ammonium — ~~Oxalic~~
Hypophosphorous
Tartaric
Phosphomolybdic
Electro Fluorescence — Sulfocyanat
Gallic
Fluorescence { Benzoic
Benzoate.
Sulphite
Phosphate
Formic
Succinic
Citric
Bisulfuric
Picronitric
Valenianite
Wolframic
Uric
Arsenious
Flourat
Bichromate,
Tartrate

Ammonium

Oxalate

~~Fluorescen~~ Salicylic

Iodide

Rhodonat

phos ammon & Soda

x Ferr ammon citrate

Sulphate.

Chinolin Sulfuric

Boracic

Sulphphenyl

Molybdic

phosmolybdate.

Sulphophenyl

Picate

acetate

Nitrate

Hydrosulphate

phosphide

Binoxalate

Chloride

Antimony =

Arsenicos
Tartaric
Iodide -
Potassic Tartrate.
Oxide
~~Antimonate Potash~~,
Chloride.
Sulphide
Pentaflorride

Arsenic

Metallic
Arsenic acid
~~Antimonate of Arsenic~~
~~Antor~~
Realgar - Arsenic Protosulphide
White Arsenic
Arsenious acid
Sulphide

miss. A

Barium —

Iodide
Hyperoxydat
Nitrate
Oxide
Chloride
Rhodonat
peroxide
propionic
Iodide
Sulfobenzoic
Cornotic
Carbonate
Fluoride
Fluoresces Tartrate, crystfuse

get Salicylate Barium

Fluoresces Barium Sulfo Benzoid
Chromate
Sulphide
Oxalate
Resinate
Sulphate
phosphate

E Flow slight —

Boron

Beryllium —

Carbonate.
Sulphate.
Fluoride. Tungstate precip fl

Ammonium Cryst from proc
pbly better than $CaWO_4$

Bismuth,

Iodide
Tannate
Valerianate
Sulphate
~~Nitrate~~
Subnitrate
Oxide

Cerium Hydrochlorate?
Sulphate
~~Nitrate~~

Cadmium

Flouresces — Sulphate
Nitric
Sulfophenylate

Fluorescs Sulphate
Oxalate

Fluorescs Bromide

Fluorescs Chloride

Fluorescs Iodide — Flouresces
Oxide

Fluorescs Tungstate,
not so good as $CaWO_4$

Fluorescs Bromate

Calcium —

Electro fluorescence formate 1c
Electro-fluorescence Nitrate
Carbonate
Lactate
Hypochlorite
Oxalate
Lactophosphate
Fluorescence Salicylic
Sulphide
Saccharat
Silicic
Fluorescence Sulphurosum
phenylate.
Nitroso
Sulphate
Resinate.
Fluorescence fluoride
Fluorescence Iodide
Fluorescence phosphate.
Fluorescence Silicate Calcum Pectolite
formate & 1c
acetate

Calcium

Sodalime

fluorescence Tungstate Cryst.

Chloride fused

Carbide

Butyrate

Sulfocarbonate

propionic

Hypophosphorous

Carbonate

Carotec ?

Nitroo

Hypochlorite

Valerianate

Chromate

phosphide

Arsenate

Bromide

fluorescence Molybdate Cryst.

Calcium Carbide fluorresces when directly exposed to the electric arc

Chromium —

Sulphate
Chloride
Sesquichloride
Nitrate

Cerium

Sulphate,
Electro flor cusnk Bromide

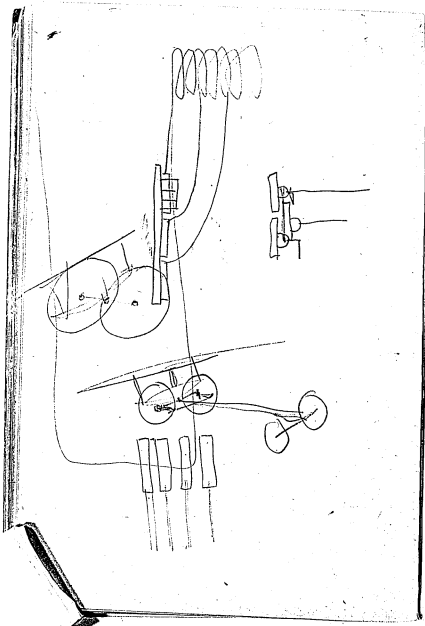
Cobalt

Acetate
Oxide
Sulphate
Nitrate
Chloride
Chromate
Oxalate
Ammonio sulphate,
Arsenate

get Salicylate

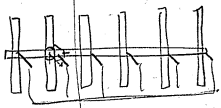
Copper

Arsenite
Nitrate
Oleic
Monochl[illegible]
Form[illegible]
Isaulaic
Malate
Sulfocarbolate
Monochloride
qst Salicylate
Carbonate,
Sulphate
Cupric ammon sulfat
Ammoniated Cu
phosphate
Chromate
Oxide bath
Oxychloride
Acetate
Fluorides
Tungstate Cryst

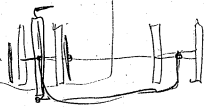


Gold
Bromide
Iodide
Cyanide
Chloride —

Iridium



Iodine



Iron —

Succinate
Sulfuricum
Valerianic
phosphoric
Salicylate
phosphorat
Tannate
Ferrocyanide
Benzoate
Bromide — Liq —

Fluorescus Acetate sicc
Sulphate + ammno
Cyan Kalium
Iodide

Electric fluores — Limat
Carbonate,

Fluorescus Dialised

Electric fluorescus Citric
Ferrous Oxalate
Ferr potas Tartrate
phospho Lactate
Arsenate
Liquor Ferri nitrate

Iron
Tartrate
Oxide
Phosphate
Ferr Lactat, acetabulat,
Citrate
Broncitrate
Ferr Manganese Citrate
Ferr Ammon. pirolo sulphate per ℔
Iodide
Tannate
~~Strong~~ Sesquichloride
Ferrous Chloride
Ferric "
Sulphate
Resinate
Sesquioxide

Lithium.

Fluorescin Bromide.
of fluorescin Benzoate
Oxalate
Benzoic
Citric
Salicylic
Ferr citric
Citric
Sulphate
Iodide
Nitrate
Carbonate
Phosphate
Electro flor weak Chloride
Oxalate of Lithium fluorescin when exposed directly to the arc. Light but not in dark box.
2nd among Electro flur strong Bichromate

Lead.

Fluoride

Nitrate

Fluoresces Tannate

Flouresces Sulphate

Hyposulphuro

Fluoresces Iodide

Iodat,

Oxalate

Chromate

Boracic

Flouresces Tetramalaphosphate

Acetate,

Nitrate.

Oxide Litharge,

Flouresces Bromide

Fluoresces Chloride.

Fluoresces. Carbonate.

Tartrate

get Salicylate

peroxide

sulphide.

Oleinate

Ferrocyanide

Lead

Permanganate.
Cyanide
Formate
Hypophosphorous
Oxide Litharge + Red Lead
Carbonate
Sulphite
Cyanate
phosphate.

EF very weak - Molybdate
Tungstate Compt

Magnesium

Nitrate
Lacto-phosphate
Phosphate
Hypophosphites
Silicic
Tartrate
Sulphate
Sulphide
Oxide
Hypophos
Benzoic
Acetate
Citric
Hyposulphite
Bromide
Carbonate
Valerianate
Iodide
Oxide Calcined
Sulphate
Chloride
Stearate

get Salicylate

Molybdenum

~~fluorides~~ Molybdic acid

Oxide -

Molybdenite

phosphomolybdic acid

~~Alu~~

Manganese

Oxalate
Sulphate
Tartrate
peroxide
Cacodylate
Benzoate
Chloride
Chromate
Bromide
Citrate
Carbonate
Chlorat
Arsenate
Boracic
Lactate
Iodide
gt Salicylate
Borocitrate
Hypophosphorous
phosphate
Sulfophenolate
Sulphate
Oxide
Resinate

Mercury ung Salicylate.
Bichloride
Sulphate
Phosphate
Oxide
Hydr Chlorid Ammon
Nitro
Prodonitrate
Chemic Liquid
Aromate
Acetate
Fluoresces Bromide
Biiodat
Methylchlorat.
Fluoresces - phenylate,
Fluoresce Sub-chloride
Fluoresces Mercurous Chloride
Fluoresces Mercuric Chloride
protoiodide
Tannate
oxalate
Electro fluor fluorescing Mercurous Nitrate
cyanide
nitrate ic

Mercury
Sulphide
Oxide
protoniterate
Oxychloride
Sulphocyanide
Bichloride
Cinnabar
Resinate

EF very weak Lactate

Nickel.

Nitrate
Chloride
Chl Nis & ammonia
Iodide
Oxalate
Carbonate
Sulphate & ammon
Bromide
Cyanide
phosphate
Oxide - black
sulphate
acetate

Potassium —

Aluminate
Xanthogenic
Tartrate,
propylsulfonate
Antimonate
Stannate
Sulphate
Sulphite
Bisulphate
Trichromate
Methylsulphate
Chromate
Bisulphite
Isobutylsulphate
Nitrate
Iodide —

Fluorisces

Fluorisces Bromide

Fluorisces Silicate.

Nitroso
Cyanide
periodide
Chlorate
Molybdate
perchlorate

qt Salicylate

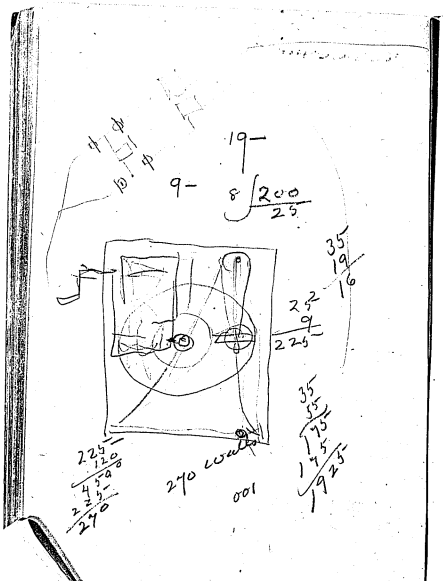
Potassium.

Silicic fluoride
Bichromate
Cyanuret.
Nitrate
Chromate
Nitrous
Sulphite
Iodide
Caustic
Carbonate.
Nitrite
Ferrocyanide
Borate.
Phosphate.
pyrophosphate
Fluorescein Salicylate
Osmiate.

~~Magnesium~~ Silver

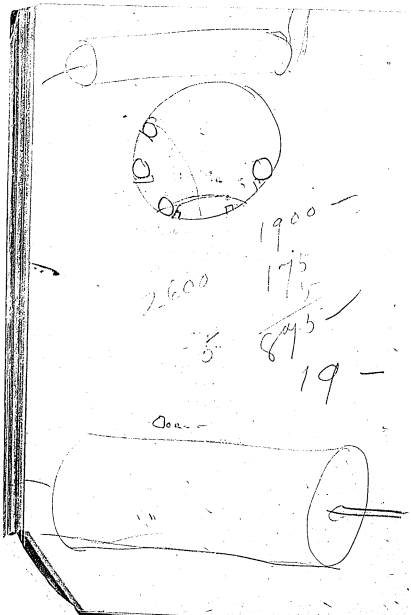
Chromate
Oxalate
~~Fluorides~~ Carbonate
Sulphate
~~Fluorides~~ Chloride
Iodide
~~Fluorides~~ Bromide
Cyanide
~~Phos~~ Nitrate
Salicylate — phosphate
acetate
oxide

~~Electrofluors~~ Nitrate



Sodium phosphomolybdenate

Fluorescence Iodate
Iodide
Boro-benzoic
Chlorate
Citric
Butyric
Isobutylsulfonic
Bromide
Benzolsulfonic
Bitartric
Binoxalate
Benzoic
Arsenate
Sulfoxinate
Phenolic
Ferricyanide
Hypermanganate
Hippuric
Methyl sulfonic
Molybdenate
Nitrosum
Nitrite
Fluorescence Cresotinic
Fluorescence Salicylate
Sulfonic
Stannate
Hyposulphite



Sodium Iodide.
Flouraf
Pyrophospha
phosphate.
Sulfocarbolate
Hyposulfate
Silicate
Sleate
acetate
~~Fluoresce~~ Fluoride ✓
~~Fluoresce~~ Bromide ✓
~~Fluoresce~~ Carbonate.
~~Fluoresce~~ Chloride ✓
~~Fluoresce~~ Tungstate
~~Fluoresce~~ Soda lime,
Electro fluoresce
Ethylsulfuric
Benzoate.
Carbonate
Benzalsulphs
Nitroprussic
Metaphosphate

If you contemplate buying an Electric investigate the Edison battery. Its compared with the ordinary Gallery it ~~costs~~ costs Considerable more at first but it ~~without~~ ~~[illegible]~~ if Life is several times greater it is ~~[illegible]~~ far more reliable ~~[illegible]~~ & gives you from two to three Times the Mileage ~~[illegible]~~ Send for Catalogue to the E B B Co

Sodium

Ferr natrium

Bisulphas

Silicate

Borate

EF very weak — Creosotinic

Aluminate

Caustic

Monosulphide

Chloride

Stannate

Electr splendid — Plumbate — 3" away

Biborate

Bicarbonate

Oxalate

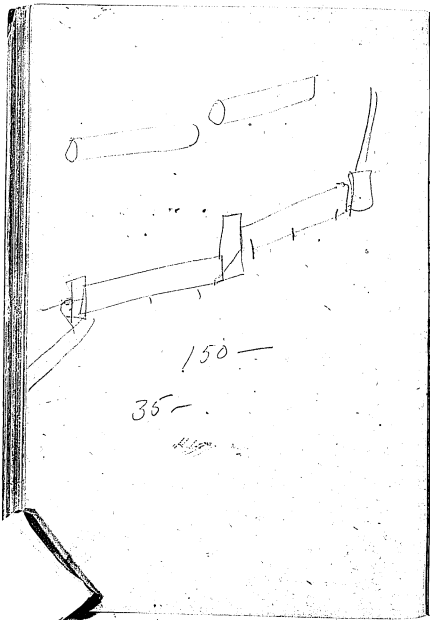
Hypophosphorus

phosphate

Electro fluo weak — Napolotate

Electro F 3" away — Iodate strong

Electr very weak — Tetraborate



Strontium — Salicylate —
Fluorescés — Chromate
Fluorescés — Oxalate ✓
Oxalate
Fluorescés — Tungstate
Oxide
Carbonate
Fluorescés — Chloride ~~Crystl~~
Chlorate
Nitrate
Fluorescés — Tungstate Crystl fuse
~~Fluo~~ — Bromide
Resinate
Fluoride
Fluorescés — Molybdate
~~Fluoro Boyle~~
Electric 3 Tray phosphate (weak)
Sulphide Strontia quite strong
fluorescés direct in arc light
fused wld pbly be better to
operate for good fluorescence over

Strontium

EF weak - Iodide

Tin -

Chloride
Oxide
Sulphate
Bisulphide
protochloride
Hypophos

62 Lu
22 Silica
11 alu
[illegible]

Dossier

27

Uranium

Oxalic
Oxides
~~Chloride~~
Fluoride - acetate
Fluoride phosphate.
Fluoride Nitrate -
Fluoride Sulphate;
Electro Fluor weak Bromide.

Titanium.

Titanic acid

Tungsten.

phosphowolframic acid

Fluoresces Tungstate
Zinc — Phosphate
fluoresces Acetate —
fluoresces Chloride —
fluoresces Carbonate
Iodide
Fluoride
Sulphate
Chromate
Nitrate
Resinate
fluoresces Molybdate fuses
Electro fluor — Cyanide
Phosphate
Hypophosphate
Ethfluor 3" away strong — Iodate
Bromide —
Electro fluor — Hypermanganate
fluoresces Tungstate
Not so good Calloz
Electro f possibly Permanganate
Rep fluor

OVER

Zinc

Ferrocyanide powder

Conductor spark, jumps thro Gas

Curious =

EF slight Oxalate

Phosphorus

Wachs phosphorus

phosphoric anhydride

phosphorus

Electro fluor fair Amorphorous

Thallium

Sulphate
Carbonate

Miscellaneous

Naphthalamine Hydrochl
Bone ash
Iodide Sulphur

phospho-Wolframic acid,
Silicic
Infusorial Earth
Arsenic acid
~~Calcium~~ French chalk
phosphoric acid

~~Fluorides~~ ~~Lithium Bromide~~

~~Saltcake~~
Commonchalk
Iodine
Sulphur
Anthracene
Boracic acid
Palladium Chloride
Erbium Sulphate
" Oxide
" nitrate
Cassium Benzoic
Chlorocrolon sauce
Trichlorophenol

Miscellaneous

Sulphide Selenium
Foliated Tellurium
Bismuth Sulphur
~~Arsenious acid~~
Tolueyl Sauve acid
Fluoricein
Eosin
Guanidin Sulfocyan
Myxpath mineral
Silicon Carbide (carborundum)

Electro flor strong Silicon fluoride
flor strong Gold & Potassium Cyanide
flor strong Zirconium & Potassium fluoride

Flow Mercury Oxycyanide

Flow Caesium Rubidium & Ammonium Bromide

Flow Bismuth & Cerium Salicylate

Flow Bismuth Sub Benzoate

Flow Sodium Potassium Carbonate

Flow Lithium & Benzo Salicylate

Flow Bismuth Benzoate

Flow Lithium Benzoate

Flow Acid Sulfosalicylate

Oz specimens tried.

No 1 ~~Sulp~~ Sulphur Celestite

2 ~~Fluorescence~~ Monazite Sand small pieces

3 Sphalerite.

4 Aragonite Sulphur

5 Kimberlite, Diamond matrix

6 Realgar

7 Fluorescence Celestite

8 Fluorescence Fluorite

9 Fluorescence Rocksalt,

10 Cinnabar

11 Cryolite.

12 Siderite.

13. Corundum

14 Micaceous Haematite

15 Melaconite.

17 Cassiterite

18 Chysoberyl

16 Barite,

19 Serpentine.

Uranite 20
Rutile. 21
Minnun . 22
Brucite. 23
Quartz 24
amphibole Hornblende 25
" Asbestos 26
pyroxene 27
Aifedsonite 28.
Rhodonite 29
Omphacite 30
Spendomene – Jrephane 31
Beryl. 32
Willemite. var Troostite, 33
garnet Almandine 34
Fluorescence Zircon Hyacinthe 35
Chrome Garnet 36
Vesuvianite 37
Alanite 38

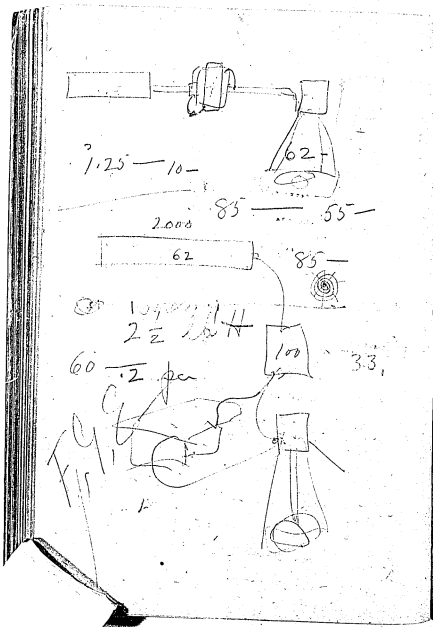
Nephite Jodeite 39
Epidote 40 ✓
Gadolinite Nephrite 41
Mosandrite 42
Fluorescs Danburite ✓ 43 Borosilicate Calcium
Phlogopite 44
Muscovite 45
Lepidomelane 46
Lepidolite 47
Scapolite 48
Fluorescs Orthoclase Andalusite Shale alt K 49
Amazonstone 50
Obsidian 51
Catlinite 52
Pitchstone 53
Porphyry 54
Sodalite 55
Albite 56

172
842
90
1650 | 900000
60
40
733
27
500
132
14
8
108
36
7
2
3759
172
2200
24
6600
44000
52800
9600 | 900000
768000
1440000
7440000
2600
24
48000
96
6225
1864
62255
60972
1120
8400
24
2

Tourmaline quantitate 57
Chrondite 58
Columbite 59
Topaz 60
Cyanite 61
Titanite 62
Dalolite 63
Staurotite 64
Fluorine Pectolite 65 Silicate Calcium
Phenite 66
Thorite 67
Chloroastrolite 68
Apophyllite 69
Natrolite 70
Chabazite varphacolite 71
Analcite 72
Crondlettite 73
Margarite 74

Wolchonskoite 75
Microlite 76
Columbite 77
Tantalite 78
Fluorine Pyromorphite 79 phosphoChloride Lead
Fluorine Apatite 80 phos Calcium
Samarskite 81
Polycrase 82
Fergusonite 83
Wavelite 84
Harmotome 85
Stilbite 86
Heulandite 87
Brewsterite 88
Zunyite 89
Jade 90
Menetite Var Camphyte 91
Fluorine Herderite 92
phos al phos + Fluorine Calcium

Metabrushite 93
Damourite 94
Pinite 95
Jeffersonite 96
Vermiculite 97
Maconite 98
Lazulite 99
Wulfenite Red 100
Huorner " Yellow 101
Molybdate of lead
Huorner Calcite 102
Torbonite 103
Arsenosiderite 104
Autunite 105
Sassolite 106
Borax 107
Colemanite 108
Warwickite 109
Hubnerite 110
Wolframite 111



Fluorescence Scheelite 112 Tungstate of lime
Barite 113
Thenardite 114
Pucherite 115
Rhodonite 116
Vanadinite 117
Celestite 118
Anhydrite 119
Gypsum Var Selenite 120
Anglesite 121
Rhodocrosite 122
Aragonite 123
Dolomite var pearl 124
Strontianite 125
Cerrusite 126
Hydromagnesite 127
Malachite 128
Azurite 129
E.F. best yet Wolfram — Hunt it fluorescence

1650) 8000 —
990
8990

1650
45
8250
6600
42 C 1650) 250 0942
8250
3300
41250

6. 70

1650
60
990.00 54

4900
4125
775

45
20
360
90
12.6

775
550
225

1650) 90000 (54.5
8250
7500
6600
900

5955

111 . 33c
42c

7200 cells.

444
465
75
60
63

1097

55
300
16500

1650) 1097 Cells week

gene — 91.00
mfg 266
Tool 57
[illegible] — 30
444

24
300
72

mfg 1650 (149000 (903.
14850
500

4945
550
4395

1650) 439500 (266
3300
10950
9900
1050

1650) 95000 (57
8250
12500
11550

1650) 5000 (30
4950
50

Crystals made by myself marked
1 2 3 4 5 6 7 8 9 X —

are

No 1 x Molybdate Barium
~~Fluorescence~~ No 2 x Tungstate Zinc
~~Fluorescence~~ 3 x " Cadmium
4 x Molybdenate Zinc — slightly fluor
5 x Molybdenate Cadmium
~~Fluorescence~~ 6 x Molybdate Calcium
~~Fluorescence~~ 7 X Molybdate Strontia,

No 2 has apatite which fluoresces brighter than $CaWO_4$ —
No 7 + 3 also have apatite that fluoresce well but No 2 very brilliant,

Nos 4 5 + 6 no —
New hat No 3 3/4 as good as $CaWO_4$
No 2 only 1/2 as good, it was colored perhaps made wrong —

A slightly acidified sol of Iodide K is sensitive to light

The Best fluorescers are

1st Pt Ba Cy Tungstate Calcium
2nd Cy K Pt Cu Strontium,
3rd Platino Cyanide Barium —
4th Salicylate Ammonia —
5 Strontia Salicylate,
good undetermined.

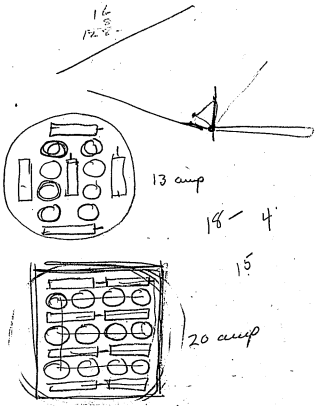
Mercury Diphenyl
Sub-chloride Lead
Iodide Cadmium
Nitrate Uranium
Bromide Potassium
Tetra metaphosphate Lead
Iodide Potassium
Fluorite, fluorspar
Bromide Lead
Sulphate Lead,

With smaller Co. P. + 5 or 6 oz. 6 ks per sec. best is 1st Ca Tungstate 2nd Mercury Diphenyl, 3rd Salicylate Strontium, 4th acetate Uranium. — Hg Dip — gives no phos like WO_3 Ca

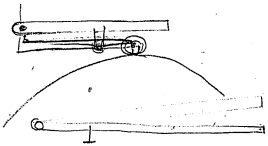
Crystals and ppts + bodies opaque
or semi opaque to Electrical
acoustic waves.

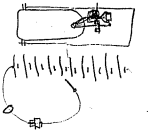
Microtite — Very pyrochlore, Niobate & Titanate of Calc
Columbite — Native Niobate of Fe + manganese
Tantalite — Ferrous Tantalate,
pyromorphite, (phos chl Lead)
Thorite — Si 19 — ThO, 59 — sometimes quantities Keg
Wulfenite — Molybdenate Lead
Angleesite — good — Native Sulphate Lead
Cerrusite — Carbonate Lead
Fluoride Lead
phosWolframic acid
Cinnabar. Sulphide mercury
Iodide ammonium
Iodate Lead
Sulphide Lead
Salicylate Calcium
Prodonitrate Mercury
Sulphate Mercury | good
Chloride Tin
Cassiterite, oxide tin

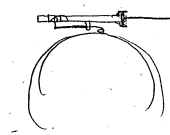
Zircon Hyacinthic
Uranite,

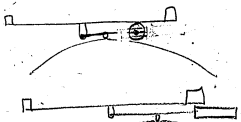

13 amp
18 — 4'
15
20 amp
4c
300
700

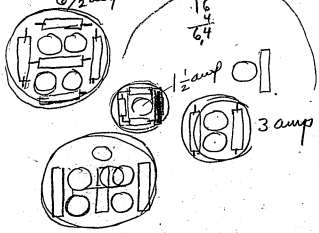
5
6

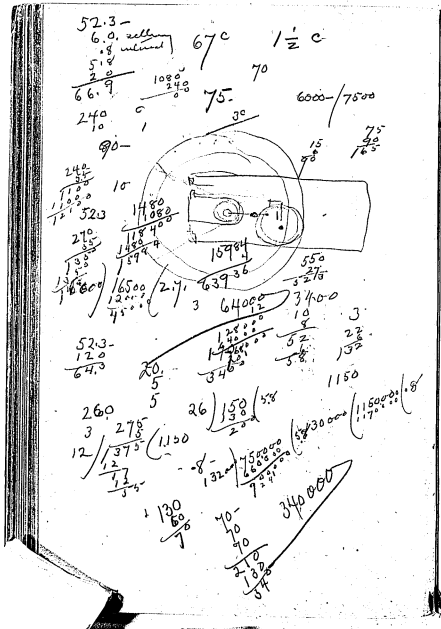


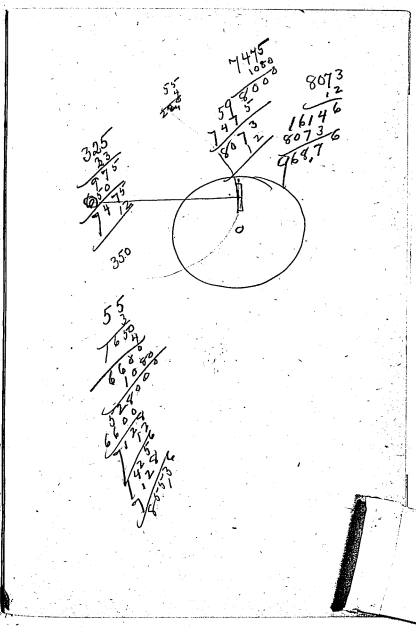


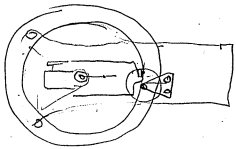





6½ amp
16
4
64
1½ amp
3 amp







Organic

Nitrotoluol Cryst Para
Nitronapthalin -
Napthalin. Bibromide
" " Hydrochlorat
Napthalamine.
Narcotin
Cinchonia Sulphate.
Chinchi Salicylic
" Tartaric

Amido-azo-benzol Hydrochlorate
Acid Alphanapthol.
Brucin Nitrate
Binitrotoluol,
Binitrobenzol.
Tannic acid
Meric acid
Beta Napthol
Cumarin

Organic

Sulphat Morphia
acetate "
Carmine No 40
Nitrophenol para
phenanthren
Pinakon
piperionamid
purpurin
pyridin
phenolalein
Papavern
phologlucin
Urea Chloride
Urea
Triaethylamin
Triphenylmethan
Traubenzucker
Saccharin
Talmudin
Succinic acid

Organic

Gallic acid

Paraoxybenzol

oxy-Benzoesaure

Oxyacetbutter Saure

Trichloracetic acid

Copaivic acid

Zimmetsaure Synthetic

acid Croetonic

" Cinnamylic

" Amygdaleum

" Camphoric

fluorescen " Benzoic

Coffeen Benzoic

" Valerianic

" arsenic

Citric acid

fluorescen Salicylic acid

fluorescen Aniline Violet

fluorescen Malic acid

fluorescen Dephenylamine

Organic

Fluoro Ruffigallic acid

Fluoro Pyridin Nitrate

permability to X

1st class	2nd class	3rd class
96	65	108
26	48	54
107		89
45		99
		55
		7
		47
		29

1st	2nd	3rd
96 is gefferosite	65 pectolite, S.S. fluorescence	108 Colemanite,
26 asbestos	48 scapolite,	54 porphyry
107 Borax		89 Zunyite
45 Muscovite,		99 Lazulite
		55 Sodalite
		7 Cobalite, S fluorescence
		47 Lepidolite
		29 Rhodonite,

Tungstate Ca quadratic pyramids P
modified by faces 2 P∞ & $\frac{4Pz}{2}$ the latter
occurring hemihedrally for
P length principal axis 1.0858 angle
P P in terminal edges = 107° 20'
in lateral edges = 113° 51' occurs
likewise uniform with Calcium
structure. Hardness 4.5 @ 5 spec g
6 to 6.07

Tungstate Sr isomorphous with above
" Cad " "

Salicylate Ammon Cry monoclinic
" Calcium octahedrons

Water Sol had 1 oz molecular in 2 2/3 (2/3) water

Absorption of Liquids for X Ray —

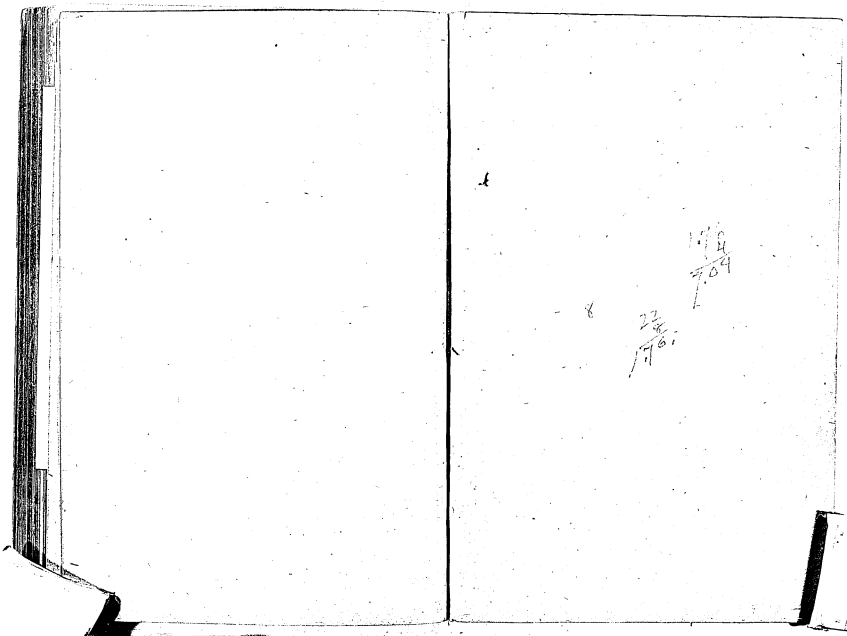
Water Cuts off about 1/2 when inch thick —

Benzine Less than water
Oil Sassafras " " "
Benzol " " "
Oil Mirbane about same as water
Aniline Oil " " "
Dynamo oil Little less than water
Linseed Oil slightly more res than water
Creosote about same as water
weak bulb.

Sulphate Aluminum, about same water
Benzoate Ammonia Little more than "
Phosphoric acid about twice that of "
Sulphocy ammonia Little more than "
Arsenic acid Dead black very great absorption

Chromic acid twice as much as water
Oxalic acid Little more than — "
Citrate ammonia about same "
Salicylic acid. perhaps less than water
Picric acid — same as water
Ammonia Chloride "
Boracic acid "
Malic " "
Citric "

Iodide ammonia Strong absorption
Iodine & alcohol not strong can see
through it — Quite large Res.

Chloroform Very great absorption
no flor but think it lights up
Box — very stronger $CuCl_2$ —

Blende Chlorate Sodium, Borracite
Tourmaline, Quartz, Calamine,
Topaz - Oxalic Tartaric acid
Sugar - Seignettes Salt Electric
by pressure — Try them for
X —